

REMARKS

The Office Action and cited references have been carefully reviewed. Claims 1-30 are rejected. Claim 1 has been amended to correct the antecedent for the term "process fluid." This amendment does not change the scope of the claim. Claims 25-27 have been amended. These amendments do not narrow the scope of the claim. New Claim 31 has been added. Claim 1-31 are pending. Reconsideration of the rejection of claims 1-30 and indication of the allowance of claims 1-31 are respectfully solicited.

Objection to Specification

The Office Action has rejected the abstract due to the term "is disclosed." While it is noted that numerous issued patents have this term, the abstract has been amended to remove this term. Specifically, the term "disclosed" has been replaced with "provided." It is respectfully requested that the objection to the abstract be removed.

35 U.S.C. §102 Rejections

The Office Action has rejected claims 1-30 under 35 U.S.C. §102(b) as being anticipated by Wells et al. (U.S. Patent No. 3,958,592), Nelson (U.S. Patent No. 3,770,247) or Curran (U.S. Patent No. 3,648,718). These grounds of rejection are respectfully traversed. Reconsideration of these rejections in view of the following comments is respectfully solicited.

It is axiomatic in U.S. patent law that to reject a claim under 35 U.S.C. §102, each and every limitation must be found, expressly or inherently, in a single reference and arranged as required by the claims such that the reference discloses the identical invention. See MPEP § 2131. Anticipation is not established if in reading a claim on something disclosed in a reference it is necessary to pick, choose, and combine various portions of the disclosure not directly related to each other by the teachings of the reference. See *Ex parte Beuther*, 71 USPQ2d 1313 (BdPatApp&Int 2003), citing *In re Arkley*, 172 USPQ 524, 526 (CCPA 1972).

The present invention overcomes the problem of prior art designs in preventing or otherwise limiting the loss of process fluids passing through the a valve. The Examiner is directed to Figures 9 and 10 of the present specification and to the corresponding text in paragraphs [0037] to [0040]. It can be seen that a piston, which has a face exposed to process fluid flowing through the flow passage, extends through and surround the stem. The piston

also has a sleeve portion that extends axially along the stem and contains a seal packing. The seal packing includes cup seals axially spaced apart by a spacer element with seal retaining washers providing for balance and retention of the seals. Ports extend through the spacer element to a cavity containing lubricant that lubricates the stem with pressurized lubricant as a result of the pressure resulting from the process fluid impinging upon the face of the piston.

For support of the rejection, the Office Action copies the independent claims and states that the references teach the elements. With respect to dependent claims, the Office Action only states that the references teach the limitations as claimed. The Office Action does not point out with specificity where the references teach what is claimed in the independent claims or the dependent claims. Instead the Office Action states to see each document in its entirety. The Office Action then states that the Applicant should see particularly at least certain elements in the cited references and then states the elements.

M.P.E.P. § 706 requires that the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. M.P.E.P. § 2106 VII requires that the Office Action should clearly communicate the findings, conclusions, and reasons which support the rejections. It is respectfully submitted that the Office Action has not clearly communicated the findings or reasons which support the 35 U.S.C. 102 rejections. Instead, the Office Action requires the Applicants to guess what the reasons are why the Patent Office believes the references teach every element of the claims. For this reason alone, the rejection should be withdrawn.

Furthermore, the cited references have been reviewed in detail to avoid unnecessary office actions as it is respectfully submitted that none of the references teach or suggest what is claimed in claims 1-31.

With respect to Wells et al. '592, it is respectfully submitted that Wells et al. '592 does not disclose, explicitly or inherently, the invention claimed by claims 1-30, and therefore cannot anticipate these claims.

With respect to independent claim 1, no face of the piston 45 of Wells et al. '592 is acted upon by process fluid as required by claim 1. Additionally, the piston 45 does not have a sleeve portion as required by claim 1. Instead, a separate sleeve 100 is along the stem 38 and is separated from the piston 45 by a washer 94. The seal packing 60 is not retained in the sleeve 100. Claim 1 requires the seal packing to be retained in the sleeve portion of the piston. The seal packing 60 is a stack of v-rings. The stack of v-rings does not have a spacer element between any of the v-rings. Claim 1 requires that the seal packing include a first and second seal element axially spaced apart by a spacer element. Clearly, from the foregoing, it can be seen that Wells et al. '592 does not teach or suggest every element of claim 1.

Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 1.

Claims 2-14 and 28 depend from claim 1 and are believed to be patentable for the same reasons put forth above for claim 1. Furthermore, no teaching or suggestion could be found in Wells et al. '592 of seal packing in fluid communication with a sealant cavity containing seal lubricant that is pressurized by the piston acted upon by the process fluid. No spacer element could be found in Wells et al. '592 that includes a plurality of ports providing fluid communication between the lubricant cavity and first and second seal elements of the seal packing. No teaching or suggestion of a seal packing having a guide bushing around the stem could be found in Wells et al. '592. No teaching or suggestion could be found in Wells et al. '592 of a seal retainer washer adjacent each cup seal of the seal packing. No teaching or suggestion could be found in Wells et al. '592 of a removable cover enclosing the seal packing where the sleeve of a piston engages the removable cover. No teaching or suggestion could be found in Wells et al. '592 of movement of the piston displacing the removable cover to indicate the amount of seal lubricant in the lubricant cavity. No teaching or suggestion could be found in Wells et al. '592 of a sealing arrangement arranged to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid.

With respect to independent claim 15, the piston 45 of Wells et al. '592 does not have a seal packing contained in the piston dynamically sealing the stem. No teaching or suggestion could be found in Wells et al. '592 of a seal packing contained in a piston dynamically sealing the stem. Clearly, from the foregoing, it can be seen that Wells et al. '592 does not teach or suggest every element of claim 15. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 15.

Claim 16-24, 29 and 31 depend from claim 15 and are believed to be patentable for the same reasons put forth above for claim 15. Furthermore, as previously indicated, the seal packing 60 is a stack of v-rings. The stack of v-rings does not have a spacer element between any of the v-rings. No teaching or suggestion could be found in Wells et al. '592 of a sealant cavity for containing seal lubricant that is in fluid communication with the seal packing and pressurized by the piston. No teaching or suggestion could be found in Wells et al. '592 of a face of the piston 45 of Wells et al. '592 being acted upon by process fluid to pressurize a sealant cavity. No spacer element could be found in Wells et al. '592 that includes a plurality of ports arranged to provide a ring of seal lubricant around the stem and to provide seal lubricant to each of the cup seals. No teaching or suggestion could be found in Wells et al. '592 of a seal packing retained within a piston by a snap ring. No teaching or suggestion of a

seal packing including a first seal, a first seal retainer washer, a spacer element, a second seal retainer washer, a second seal, and a guide bushing axially arranged around the stem. No teaching or suggestion could be found in Wells et al. '592 of a piston including an indicator, the piston and indicator moveable with respect to a top surface of the bonnet to indicate the level of seal lubricant in the sealant cavity. No teaching or suggestion could be found in Wells et al. '592 of a removable cover enclosing the seal packing where the removable cover is adjacent the bonnet when enclosing the seal packing. No teaching or suggestion could be found in Wells et al. '592 of a sealing arrangement arranged to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid. No teaching or suggestion could be found in Wells et al. '592 of a seal arrangement used and arranged on a natural gas or petroleum well without releasing process fluid.

With respect to independent claim 25, Wells et al. '592 does not teach or suggest the step of inserting a seal packing into a sleeve portion of a piston. The sleeve 100 of Wells et al. '592 is located above the seal packing and separated by element 58. No teaching or suggestion could be found in Wells et al. '592 of retaining a seal packing in a sleeve with a retaining ring. No teaching or suggestion could be found in Wells et al. '592 of surrounding a stem with a seal packing that is fitted around the stem or lubricating the seal packing with pressurized lubricant as a result of pressure exerted by the piston on a cavity containing the lubricant. Clearly, from the foregoing, it can be seen that Wells et al. '592 does not teach or suggest every element of claim 25. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 25.

Claim 26-27 and 30 depend from claim 25 and are believed to be patentable for the same reasons put forth above for claim 25. Furthermore, no teaching or suggestion could be found in Wells et al. '592 of covering the seal packing by placing a removable cover adjacent the valve bonnet. No teaching or suggestion could be found in Wells et al. '592 of monitoring the amount of sealant in a sealant cavity by observing displacement of the piston with respect to the bonnet. No teaching or suggestion could be found in Wells et al. '592 of arranging the sealing packing arrangement to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid.

With respect to Nelson '247, it is respectfully submitted that Nelson '247 does not disclose, explicitly or inherently, the invention claimed by claims 1-31, and therefore cannot anticipate these claims.

With respect to independent claim 1, no face of the packing/piston 86 of Nelson '247 is acted upon by process fluid as required by claim 1. Additionally, the piston 86 does not have a sleeve portion as required by claim 1. Instead, the sleeve 127 identified by the Office

Action is not along the stem 30. The seal packing is not retained in the sleeve 127. It is below the sleeve 127. Claim 1 requires the seal packing to be retained in the sleeve portion of the piston. The seal packing/piston 86 does not have a spacer element within the seal packing/piston 86 between any seal element. Claim 1 requires that the seal packing include a first and second seal element axially spaced apart by a spacer element. Clearly, from the foregoing, it can be seen that Nelson '247 does not teach or suggest every element of claim 1. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 1.

Claims 2-14 and 28 depend from claim 1 and are believed to be patentable for the same reasons put forth above for claim 1. Furthermore, no teaching or suggestion could be found in Nelson '247 of seal packing in fluid communication with a sealant cavity containing seal lubricant that is pressurized by the piston acted upon by the process fluid. No spacer element could be found in Nelson '247 that includes a plurality of ports providing fluid communication between the lubricant cavity and first and second seal elements of the seal packing. No teaching or suggestion of a seal packing having a guide bushing around the stem could be found in Nelson '247. No teaching or suggestion could be found in Nelson '247 of a removable cover enclosing the seal packing where the sleeve of a piston engages the removable cover. No teaching or suggestion could be found in Nelson '247 of movement of the piston displacing the removable cover to indicate the amount of seal lubricant in the lubricant cavity. Nelson '247 teaches a rising stem type gate valve. No teaching or suggestion could be found in Nelson '247 of a sealing arrangement arranged to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid.

With respect to independent claim 15, the seal packing/piston 86 of Nelson '247 does not have a seal packing contained in the piston dynamically sealing the stem. Nelson '247 teaches that the element 86 is either a packing or a piston. No teaching or suggestion could be found in Nelson '247 of a seal packing contained in a piston dynamically sealing the stem. Clearly, from the foregoing, it can be seen that Nelson '247 does not teach or suggest every element of claim 15. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 15.

Claim 16-24, 29, and 31 depend from claim 15 and are believed to be patentable for the same reasons put forth above for claim 15. No teaching or suggestion could be found in Nelson '247 of a seal packing having first and second seals spaced apart by a spacer element. No teaching or suggestion could be found in Nelson '247 of a sealant cavity for containing seal lubricant that is in fluid communication with the seal packing and pressurized by the

piston. No teaching or suggestion could be found in Nelson '247 of a face of the "piston" of Nelson '247 accessing a flow passage and being acted upon by process fluid to pressurize a sealant cavity. No spacer element could be found in Nelson '247 that includes a plurality of ports arranged to provide a ring of seal lubricant around the stem and to provide seal lubricant to each of the cup seals. No teaching or suggestion could be found in Nelson '247 of a seal packing retained within a piston by a snap ring. No teaching or suggestion of a seal packing including a first seal, a first seal retainer washer, a spacer element, a second seal retainer washer, a second seal, and a guide bushing axially arranged around the stem. No teaching or suggestion could be found in Nelson '247 of a piston including an indicator, the piston and indicator moveable with respect to a top surface of the bonnet to indicate the level of seal lubricant in the sealant cavity. No teaching or suggestion could be found in Nelson '247 of a removable cover enclosing the seal packing where the removable cover is adjacent the bonnet when enclosing the seal packing. No teaching or suggestion could be found in Nelson '247 of a sealing arrangement arranged to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid. No teaching or suggestion could be found in Wells et al. '592 of a seal arrangement used and arranged on a natural gas or petroleum well without releasing process fluid.

With respect to independent claim 25, Nelson '247 does not teach or suggest the step of inserting a seal packing into a sleeve portion of a piston. The sleeve 127 of Nelson '247 is located above the seal packing and separated by element 58. No teaching or suggestion could be found in Nelson '247 of surrounding a stem with a seal packing that is fitted around the stem or lubricating the seal packing with pressurized lubricant as a result of pressure exerted by the piston on a cavity containing the lubricant. No teaching or suggestion could be found in Nelson '247 of a piston communicating with a flow passage and a cavity containing sealant. Clearly, from the foregoing, it can be seen that Nelson '247 does not teach or suggest every element of claim 25. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 25.

Claim 26-27 and 30 depend from claim 25 and are believed to be patentable for the same reasons put forth above for claim 25. Furthermore, no teaching or suggestion could be found in Nelson '247 of covering the seal packing by placing a removable cover adjacent the valve bonnet wherein movement of the piston displaces the moveable cover to indicate the amount of lubricant in the lubricant cavity. No teaching or suggestion could be found in Nelson '247 of monitoring the amount of sealant in a cavity by observing displacement of the piston with respect to the bonnet. No teaching or suggestion could be found in Nelson '247 of

arranging the sealing packing arrangement to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid.

With respect to Curran '718, it is respectfully submitted that Curran '718 does not disclose, explicitly or inherently, the invention claimed by claims 1-31, and therefore cannot anticipate these claims.

Curran '718 teaches methods to reduce noise of valves such as cage-guided valves, stem-guided plug valves, and needle-trim stem-guided valves and teaches control valve cooling bonnets for high temperature flow uses.

Curran '718 discloses a seal 53 on a plug 48 that is riding within a cage 43 that is in the form of a sleeve. The plug 48 acts like a piston with respect to seat ring 45. A ring gasket 44 is between the seat ring 45 and the valve body 10. The seat ring 45 is not part of the valve stem as it does not move during operation. Fluid passages 50 through the valve plug 48 connects inlet passage 33 with valve body inner chamber 36, thereby reducing the torque needed to drive the valve. From the foregoing, it can be seen that there is only one seal retained in the cage 43 and it is not part of the plug 48. Therefore, the plug 48 does not have a sleeve. The ring gasket 44 is also not within the cage 43. As a result there is only one seal within the cage 43. Clearly, a single seal does not have first and second seal elements separated by a spacer element. Claim 1 requires that the seal packing include a first and second seal element axially spaced apart by a spacer element. Clearly, from the foregoing, it can be seen that Curran '718 does not teach or suggest every element of claim 1. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 1.

Claims 2-14 and 28 depend from claim 1 and are believed to be patentable for the same reasons put forth above for claim 1. Furthermore, no teaching or suggestion could be found in Curran '718 of seal packing in fluid communication with a sealant cavity containing seal lubricant that is pressurized by the piston acted upon by the process fluid. No spacer element could be found in Curran '718 that includes a plurality of ports providing fluid communication between the lubricant cavity and first and second seal elements of the seal packing. No teaching or suggestion of a seal packing having a guide bushing around the stem could be found in Curran '718. No teaching or suggestion could be found in Curran '718 of a removable cover enclosing the seal packing where the sleeve of a piston engages the removable cover. No teaching or suggestion could be found in Curran '718 of movement of the piston displacing the removable cover to indicate the amount of seal lubricant in the lubricant cavity. No teaching or suggestion could be found in Curran '718 of a sealing

arrangement arranged to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid.

With respect to independent claim 15, the piston/plug 48 of Curran '718 does not have a seal packing contained in the piston dynamically sealing the stem. The seal 53 is on the outside of the plug 48 and does not seal the stem 14. No teaching or suggestion could be found in Curran '718 of a seal packing contained in a piston dynamically sealing the stem. Clearly, from the foregoing, it can be seen that Curran '718 does not teach or suggest every element of claim 15. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 15.

Claim 16-24, 29, and 31 depend from claim 15 and are believed to be patentable for the same reasons put forth above for claim 15. No teaching or suggestion could be found in Curran '718 of a seal packing having first and second seals spaced apart by a spacer element. No teaching or suggestion could be found in Curran '718 of a sealant cavity for containing seal lubricant that is in fluid communication with the seal packing and pressurized by the piston. No teaching or suggestion could be found in Curran '718 of a face of the "piston" of Curran '718 accessing a flow passage and being acted upon by process fluid to pressurize a sealant cavity. No spacer element could be found in Curran '718 that includes a plurality of ports arranged to provide a ring of seal lubricant around the stem and to provide seal lubricant to each of the cup seals. No teaching or suggestion could be found in Curran '718 of a seal packing retained within a piston by a snap ring. No teaching or suggestion of a seal packing including a first seal, a first seal retainer washer, a spacer element, a second seal retainer washer, a second seal, and a guide bushing axially arranged around the stem. No teaching or suggestion could be found in Curran '718 of a piston including an indicator, the piston and indicator moveable with respect to a top surface of the bonnet to indicate the level of seal lubricant in the sealant cavity. No teaching or suggestion could be found in Curran '718 of a removable cover enclosing the seal packing where the removable cover is adjacent the bonnet when enclosing the seal packing. No teaching or suggestion could be found in Curran '718 of a sealing arrangement arranged to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid. No teaching or suggestion could be found in Wells et al. '592 of a seal arrangement used and arranged on a natural gas or petroleum well without releasing process fluid.

With respect to independent claim 25, Curran '718 does not teach or suggest the step of inserting a seal packing into a sleeve portion of a piston. The cage 43 of Curran '718 is in the form of a sleeve and not part of the piston as it does not move with the piston and is a separate component. No teaching or suggestion could be found in Curran '718 of surrounding

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a stem with a seal packing that is fitted around the stem or lubricating the seal packing with pressurized lubricant as a result of pressure exerted by the piston on a cavity containing the lubricant. No teaching or suggestion could be found in Curran '718 of a piston communicating with a flow passage and a cavity containing sealant. Clearly, from the foregoing, it can be seen that Curran '718 does not teach or suggest every element of claim 25. Therefore, it is respectfully submitted that the Office Action has not put forth a sufficient basis to reject claim 25.

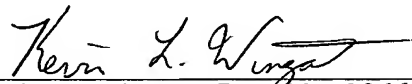
Claim 26-27 and 30 depend from claim 25 and are believed to be patentable for the same reasons put forth above for claim 25. Furthermore, no teaching or suggestion could be found in Curran '718 of covering the seal packing by placing a removable cover adjacent the valve bonnet wherein movement of the piston displaces the moveable cover to indicate the amount of lubricant in the lubricant cavity. No teaching or suggestion could be found in Curran '718 of monitoring the amount of sealant in a cavity by observing displacement of the piston with respect to the bonnet. No teaching or suggestion could be found in Curran '718 of arranging the sealing packing arrangement to seal a well head valve that is actuated with means for actuating the well head valve without releasing process fluid.

In view of the foregoing, it is respectfully submitted that the Office Action has not put forth a proper anticipation rejection as not every limitation of the claims is shown or suggested in the cited references. It is therefore respectfully requested that the rejection of claims 1-30 be withdrawn and the allowance of claims 1-31 be granted.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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